THE POSSIBILITIES OF FREIGHT TRANSPORTATION BY INTERURBAN ELECTRIC RAILWAYS

BY

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Introduction.

The last twelve years have seen a remarkable growth and development of the electric interurban railway. The early electric roads had but little resemblance to the modern high-speed lines. In fact, the first electric interurban railways were nothing more nor less than street railways extended into the country, and were constructed mainly for the suburban class of traffic. As a general thing, the tracks were laid along the public highways, the rails were light, the equipment poor, and in most instances, the roads were operated by street car men who had had no experience in the operation of steam roads, and who gave very little heed to the question of freight transportation.

Conditions have changed, however. The electric road soon began to see some of its opportunities and as a result the lines were placed upon a more stable footing as time went on. The light weight track along a public highway has given way to a standard steam railway road bed constructed on a private right-of-way. With this improvement has come improvements in equipment and motive power. Higher speed

has been made possible by a private right-of-way, and with higher speed has arisen the opportunity for competition with steam lines for local passenger traffic. With successful competition for the passenger business arose the question of freight competition. Many managers of the electric lines doubted very much on account of the economic conditions, whether an interurban could compete with a steam line for freight traffic, but some had faith enough in their convictions to inaugurate a freight traffic department, and so we find now several interurban electric railways carrying on a regular freight business, in many instances, in open competition with the steam lines. Some electric roads have their own regular freight cars and electric locomotives and haul trains of ten or twelve cars, while other lines, not having developed their business to this point, use a trailer car coupled on behind a regular passenger car, or use space in the passenger car for the freight.

This proposition is still new. A dozen years is but a short time to try to bring out all the possibilities for freight traffic which an interurban can handle. The literature on the subject is limited, and as yet but few statistics are available. Nevertheless, enough data are available to show that there are certain fields of the transportation business for which the interurban electric railway is especially adapted, and it is the purpose of this paper to point out some of these fields and to show, how in some instances, the traffic has been handled.

I. A General Survey of the Situation.

*Mr. P. P. Crafts, General Manager of the Iowa & Illinois Railway Company, Clinton, Iowa, and of the Joplin & Pittsburgh Railway Company, Pittsburgh, Kansas, has stated upon what conditions, to a large extent, will depend the profitableness of the freight business which an interurban electric road can handle. These conditions are:

"1. The population served outside of the main terminal and its dependence upon that terminal as a trading center.

2. The proximity of other trading centers to the population served outside of the main terminal, and the railway facilities tending to attract business away from the main terminal.

3. Steam trunk line connections leading to the main arteries of commerce and the ability of interurban roads to establish joint rates with them."

Of these three conditions, the last is most important, for it can readily be seen what a large bearing the outside markets have upon the transportation business of any road, especially of the interurban, which must wait for the outside traffic, that is, traffic beyond its own zone of operations, to be brought to it.

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*Light Freight Handling on Electric Lines, P. P. Crafts. A. S. & I. R. A. 1907, vol.1, p. 146.

If the interurban can make arrangements with some main trunk line railway for joint rates and the interchange of cars, then its chances of profit are considerably increased, for it brings itself into friendly relationship with this line. The steam line, moreover, by such an arrangement has practically extended its service into the territory served by the electric line, which in this case assumes the function of a feeder.

It is, of course, very evident that an interurban's best interests lie in the less-than-car-load business. A majority of the railroads are not so much interested in this class of traffic as they are in the car-load business, for they claim that the less-than-car-load traffic is conducted at a loss. This statement is, of course, rather difficult of verification. But it must be admitted that the railroads are right when they contend that in the case of car-load traffic, the loading and unloading is done by the consignor and consignee, much of the traffic is handled in private yards, the accounting necessary is less complicated, and the chances for claims are smaller.

It has been estimated that 80 per cent of the freight business done by the steam lines is car-load traffic. The interurban electric road is in many ways specially adapted for carrying on the less-than-car-load business. It may never become a serious competitor of the steam roads for the car-load traffic, but, past experience has shown that a considerable traffic may be developed from the remaining 20

per cent less-than-car-load business.

The units of transportation of the electric road are far superior to the motive power of a steam line for this class of service. A modern motor car is comparatively light, easily handled, and needs no overhauling after each trip. Furthermore, the motive power of the electric road is much more flexible in meeting varying conditions of traffic. An electric motor car or locomotive can be started and stopped much more quickly than a heavy steam locomotive and attached cars. Furthermore, a locomotive needs to be steamed up before it can be of any value, while an interurban needs but the simple moving of the control lever to make it available for service.

But on the other hand, it must be remembered that an interurban motor car is an expensive piece of equipment for freight haulage. Suppose, for instance, that on an electric line it is impossible to use a trailer freight car, and that there is not enough business to justify a separate freight train. In this case it will be necessary to use a single independent motor car for the work. A motor car is expensive, costing somewhere in the neighborhood of $10,000.00 and it is very evident that the traffic handled will have to yield considerable revenue in order to pay interest on the investment and allow for the depreciation of equipment.

But when the freight business begins to increase, it will soon reach a point such that a train consisting of one

motor car and several regular freight cars may be employed. In this case, the investment, in proportion to the haulage capacity, is considerably less.

Where there is opportunity for car-load business, then the chances for profit are considerably increased; and there are opportunities for securing a car-load business in the territory served by most interurban electric railways. Products of mines, grain, and cattle are among the things which lend themselves most readily to transportation in car-load quantities. It may be necessary to build special spurs, erect elevators, and construct and maintain cattle shutes, but the business obtained thereby is permanent, easily handled, and well paying. For instance, take a cattle raiser who lives close to an interurban railway, but several miles away from a railroad cattle shute. Suppose the manager of the electric railroad were to go to him and say, "See here, if you drive your cattle to that cattle shute, they are going to shrink 47 pounds per head for every mile you drive them, while they will only shrink about* 25-30 pounds per head for a 300-400 mile railway trip. Would you not be glad to avail yourself of the privilege of loading direct on a car which we will place here on this siding for you?" And when it is proved that the saving effected will be a material one, it is certain that the man will load his cattle at the

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*Light Freight Handling on Electric Lines, P. P. Crafts. A. S. & I. R. A. 1907, vol.1, p. 146.

interurban siding. This, of course, presumes interchange and joint rate relations between a steam line and an electric road.

Thus the electric road gives to the farmer the advantage of a through line. He has but to notify them of his intention to ship, and a car will be secured and placed on the siding at his disposal. Likewise, this is applicable to the small village and country merchants. They are given the opportunity of making or receiving shipments on short notice.

The steam roads may be regarded as the main arteries of transportation of the country, but these main arteries need distributing capillaries, both for distributing and gathering up traffic; and the interurban lines can very handily perform the duties of the capillaries.

Furthermore, as soon as the business has reached the stage where it justifies running regular freight trains, it may be handled at night when the passenger traffic is the lightest; this procedure will also help to equalize the peak load of the power house, as the power station must be operated at night notwithstanding the lightness of the passenger traffic. It will take practically no more fuel to furnish current for one passenger car and the freight train than for a single passenger car. Of course, where such trains are used they must be rather short, as the sharpness of curves will cause buckling and derailment if the train is too long and the angle of pull too great.

In classifying the traffic which may be obtained by an interurban railway, the following classes are at once evident:

1. Small packages, transported in compartments of passenger cars at package rates. This may be termed an express business.
2. Less-than-car-load on regular freight trolley cars at regular or special rates.
3. Combination of classes 1 and 2.
4. Car-load traffic.

The average interurban constructed for passenger business originally, can handle class 1 freight without very much change in its equipment or clerical force. But if the Company is inclined to push the business and solicit traffic, then the compartments in the cars will soon be outgrown. At such a time the question must be decided as to whether or not a separate freight department will be organized, and if so, just how the traffic will be handled. Also, it will be necessary to give consideration to the question of freight houses and terminals.

It must be borne in mind that this less-than-car-load freight which the interurban will handle needs very careful attention while it is in charge of the Company. One item that must be kept down at its lowest possible figure is the claims for lost and damaged goods, as one large damage claim may eat up the profits of several week's business. In order to keep down this item, great care must be observed in handling this traffic, so that there is the least possible chance of

loss or damage. A system of storing freight in the various houses should be devised which will best take care of local conditions. A great deal of the traffic carried will be consigned to parties who are unknown to the employees of the freight house. In this case it is necessary that the goods be placed where they can easily be located. It must be the one thought of each man working for the Company that he must create a good impression upon the patron, and that good service is the main factor of good impressions in the transportation business.

While dealing with this question, it might be well to say a few words regarding the billing of such shipments. It is possible, of course, for the Company to use the standard waybill form that is used by the steam railroads. But a form may be found which will be better suited for the immediate purpose in hand. This will, of course, depend upon the organization and working of the road in question.

*One line, the Pittsburgh, Harmony, Butler, & New Castle Railway, has adopted a rather novel scheme of billing which appears to be rather efficient. They have combined the bill of lading, waybill, and expense bill into one form. The back of this form contains a printed contract for the transportation of the commodities. On the face is another contract similar to the standard waybill contract. The bill gives the

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*Freight Transportation on the Harmony Route. E. R. J. vol. 42, p. 1034.

shipper's number for the consignment, and also the number given by the agent for the same consignment, number of packages, description of the articles, weight, class, rate, charges, amount paid, and collect. At the bottom are spaces for the signatures of the shipper, receiving agent, the travelling freight agent, the delivery agent, and the consignee. The heading for each of these spaces reads "Date,_____ Received shipment as above except". The method employed in using this form is as follows: When the receiving agent gets the goods he signs this bill, noting the exceptions; the shipper also signs it. The receiving agent must make the bill out in quadruplicate. The shipper is then given one copy of the waybill. When the receiving agent delivers the goods to the car, the waybill is signed by the travelling freight agent, who notes any exceptions and retains one copy. When the delivering agent receives the goods, he signs and keeps the bill held by the travelling freight agent. When the goods are delivered to the consignee the bill is receipted by him, and then sent to the general freight agent. In the meantime the receiving agent has retained one copy of the waybill for his own records and has forwarded the other copy to the auditor, who enters the bill and forwards it to the delivery agent. Thus it may be seen that there is a constant running record of the shipment, which can be referred to at any time and the cause and blame for any delay in transit determined.

Probably the most serious obstacle which an electric line will meet in the transportation of freight will be the various franchise limitations of the towns through which it passes. Many cities object to having heavy traffic hauled along the main streets of the town, and restrict accordingly the franchise which is granted to the electric line.

If an electric line operates under such a restricted franchise, it is placed at a double disadvantage. The merchants of the town can not be reached directly, and in all probability, the road will have to purchase additional right-of-way and construct a belt line around the town.

However, such a belt line will give opportunity for a more rapid handling of the traffic. The delay due to slow handling on the sharp curves of the city streets will be done away with, and a better service will be the result.

It may be that the franchise of the line will restrict its rights to handle freight on the city streets to the night time, when other traffic will not be obstructed. This procedure, of course, will work a hardship on the interurban, in a way, as it can handle no freight traffic in the day time. But, many conditions are such that the interurban prefers to handle this freight at night. More power being available and the passenger traffic not being obstructed are two points which are very important to the operating department. Practically all the freight on the Illinois Traction System is handled at night.

Another important feature which will influence the business to a large extent is the ability of the electric road to make interchange relations with the steam lines. The chances are that the electric line can handle much traffic for points reached by steam lines with which it connects. If arrangements for the interchange of cars can be agreed upon by the electric and steam roads, then the necessity of transferring the freight from the electric line car to the steam line car is obviated. This, of course, presumes that the interurban track is of standard gage.

West of the Mississippi River the attitude of the steam roads has changed considerably and we find in many instances a general interchange business being carried on. In many instances the electric line participates in traffic which originates on the steam line, the interurban offering a short haul to destination. In the far west some district freight associations seem to have unwritten laws which prohibit them from making any interchange contracts with the electric lines.

Shortage of rolling stock, however, is one of the obstacles to a general interchange business. The outbound business of an interurban, will in all probability, be much larger than the inbound. *In fact, the estimate has been made that the outbound business is ten times as large as the inbound traffic. It does not require very much imagination to see how soon, under such conditions, the equipment of the electric

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*Transportation of Freight by Interurban Electric Railways. E. R. J. vol. 42, p. 589.

line will be on some foreign road, and the interurban will have to wait patiently until its cars can be returned before it can handle more freight.

II. Various Sources of Traffic.

a.Handling the Package Business.

When a road starts handling the small package business, it is virtually entering the field of the express companies. It is possible, of course, to handle this business in compartments of the passenger cars. A minimum rate and maximum weight should be determined. As to the method to be employed in taking care of the charge for this class of service, it will be necessary to use as simple a system as possible. *Probably the best system is that of selling gummed stickers of designated value which may be attached to the package and cancelled by the motorman or conductor. Packages may be stored in some prepared place in the station, and held until the consignee calls. The consignee must be notified in some way, preferably by postal card. If the station is not open continuously, it might, perhaps, be more satisfactory to arrange for space in some local store which is open all day. The goods could be left there and called for by the consignee, who should be made to sign a receipt book for their delivery.

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*Freight Transportation on Trolley Lines, Chas. S. Pease, 621.33 p. 32f.

Some roads undertook to maintain a wagonman delivery service in connection with this package business, but it was soon found that the expense of operating the wagon ate up the profits of the business.

However, it is very improbable that now such a service as this package service can be profitably maintained where there is competition with the parcel post, for within the last few years this has taken over a great deal of this class of traffic. But it is surprising what advertising will do, and it may be possible to build up a profitable package business even in the face of strong competition.

b. The Interurban Electric Railway and the Farmer.

Naturally, one of the first sources for traffic which will interest the electric road is the agricultural region through which it passes. An agricultural district should provide a rather large amount of business if some proper way can be secured for obtaining and holding the traffic.

The territory through which the line passes should be thoroughly investigated at first to find out just what are its possibilities. It may be that there are several pursuits being carried on which will yield a business for the Company if the right plan and system are adopted. It may be that the district through which the road runs is one of rather diversified agricultural pursuits, or it may be that the region is devoted to one product exclusively. But in

either case there is sure to be an opportunity for business for the Company. If fruit is raised, then an opportunity is presented for getting this fruit to an early market. Likewise this applies to the other products and pursuits such as grain, truck farming, cattle raising, dairying, and may even be made to include some lumber industries.

It must be admitted that the average farmer is slow to take up with new improvements, and will in all probability have to be shown how the service will benefit him before he will patronize the Company. Here is where will come the test. If the interurban can prove that by using its service the farmer will receive a benefit, then a permanent, high class traffic can be secured.

DAIRY PRODUCTS.

Unless the farmer has access to good shipping facilities, he will very likely not attempt to engage in the dairy business as dairy products are articles which require a speedy transportation to a market. It may be that all conditions except transportation facilities are favorable to an undertaking of this kind. If the interurban electric road can meet the demand for the transportation of this traffic, then an industry will be created which will be absolutely dependent upon the electric road, and which will yield a good revenue, but it must be remembered that the class of service rendered will influence the continuance of this business. It is assumed that the average interurban road passes

through a prosperous farming region, for it would be bad policy to build a road which did not have a good farming community behind it. If then, the region through which it passes is suitable for carrying on agricultural pursuits, it may be supposed that dairying is possible. There is no business which yields a more marketable product. But, as has been said before, quick transportation is necessary.

FRUIT.

About the same line of reasoning applies to fruit as applies to the dairy business. Of course, this traffic will be of a very seasonal type, but it is a traffic which can be handled very readily in car-load lots, and which will bear a high rate.

CATTLE AND OTHER LIVE STOCK.

This is another farm product which may be made to yield a substantial car-load business. It is true that special arrangements will have to be made, such as cattle shutes and yards, but notwithstanding this fact, it should be a profitable source of revenue.

GRAIN.

Grain is a commodity which will yield a good revenue, if adequate facilities are provided for the handling of this class of traffic. It may be necessary to erect and operate elevators, but if the conditions warrant such a procedure, then the grain traffic should be a permanent source of revenue, and will be all the more welcome as the business created will be car-load traffic.

Another important point which must be borne in mind is that the interurban road will have a very beneficial effect upon the territory through which it passes, as it will tend to build up and develop the country. This, of course, will be due to both the freight and passenger business. People will be brought into touch with one another, the farmer will be placed in close touch with the city markets, the children will be afforded a convenient means of attending the schools in the various towns, and altogether the development of the business of the interurban will be paralleled with the development of the surrounding territory.

Just one instance might be mentioned here as to what means one road has taken to bring about better conditions. The Bangor Railway & Electric Company has been showing what can be done in this way by means of a demonstration farm of 120 acres. This farm is under the expert direction of the University of Maine, and is conducted along the scientific principles of agriculture. Quite a little interest has been stimulated, and it is thought that in time an increased percentage of farm products will be the result.

In passing, it might be interesting to make note of another scheme adopted by this road to further agricultural interests and at the same time promote traffic. In 1908 it reduced the freight rate on potatoes by one hald. That year the traffic in potatoes amounted to sixty-seven car-loads.

But upon the reduction of the rate, interest was aroused, people saw that potatoes could be raised and transported to market and still yield a good profit. So in 1913, we find that the potato business alone on this line amounted to 600 car-loads, and it is estimated that in a short while it will reach 750 car-loads; no small item of revenue, especially when it is considered that this all took place on a line 25 miles in length, and having along it a population of only 2500.

c. The Small Towns.

The small towns and villages along the line will reflect the prosperity of the surrounding country. If the country is prosperous, then these small towns will be progressive, up-to-date, and always ready to advance themselves, while if the farming region is but poorly developed, a like condition will be shown in the small villages.

The opportunities for traffic in these places are good. The country merchants are the best source of business. They never desire to carry on hand a very large supply of any commodity. This fact results in small orders being placed which result in small and frequent shipments. The interurban is especially adapted for handling these small shipments. Generally, the merchant is anxious to get his goods in the least possible time, and the quick service of the electric line appeals to him. He does not care if the rate is slightly higher than the steam railway rates. It is service that

he desires, and the electric road is in the position to render the service required.

A merchant in a small town can easily order his goods by telephone and in a very short while they are in his store. It is only necessary to show him what can be accomplished in this manner, and then keep the service up to the standard. His business will then be assured.

d. The Large Towns.

In the larger towns, competition with the steam roads must be met. But it should always be remembered, that for a certain class of service, the steam roads are not capable of competing with the electric roads.

There are the various manufacturers who may use the interurban as a distributing line, or they may make use of the interurban's connection with steam lines to forward freight.

The wholesale markets of the larger towns offer excellent opportunities for business. It is but necessary for the interurban to demonstrate that it can render better service for this class of traffic than the steam line, and business is assured.

Packing houses are another source of traffic. But if a road handles this traffic, it will be necessary to have some refrigerator cars in its equipment, but in such a case they can be made a paying investment.

The large towns offer possibilities of trunk line connections with steam roads, and some arrangements should be made wherever possible whereby the interurban is to act as the distributing capillary of the steam road.

e. Miscellaneous Sources.

Coal mines are a source of revenue which some lines possess. It may be that an electric road will run through a good mining region, which, due to the lack of adequate transportation facilities, has never been exploited. The electric road may make contracts with some mine for the delivery of coal to the small towns and to the farmers along the line. It might also be the connecting link between the mine and a steam railway with which the interurban has joint rate relations. In all cases, there is an excellent opportunity for a paying traffic.

Certain industries might be developed along the right-of-way of the interurban. For instance, a good clay bank might be discovered, and a brick works established. A saw mill might be located at some suitable spot, and thus create a traffic of logs to the mill, and furnished lumber from the mill to the markets.

The sources of traffic will vary of course, with the general nature of the territory served, but it will not take much inspection or investigation to discover what sources of traffic are available, and what sources show the best chances of development.

III. Freight Houses and Terminals.

Too much stress can not be placed upon the subject of terminals. Here is where the first impression of the road is gotten, and if the impression created is bad, the road will suffer materially. Freight stations should be planned so that the drivers of the teams will have the least possible trouble in getting to the loading platform. If a driver continually has difficulty in getting his load properly placed at the freight house, it will not be long before he voices his objections very strongly with the result that his employer will doubtless try to find some other road, which although they may not offer as good transportation facilities as the interurban, does have better loading arrangements.

The location of these terminals is a very important point which should receive the closest attention. If possible, it is best that the freight house in a large sized town should be located centrally as to the various traffic producing industries. This, of course, on account of lack of space, may be impossible, and the station must be located on the outskirts of the town. But wherever it is located, the design should be thoroughly worked out so that is will meet all local conditions in the best manner possible.

Plans for the future growth of the business must be made. It must be remembered that the electric road is to develop business and that therefore due allowance must be made for the expected increase in traffic. It may be possi-

ble to acquire much more land for a freight terminal than is seemingly necessary. But, on the other hand, this may be needed badly at some future date, and even if not needed for some time, it will increase in value at a rate which will probably meet the charges necessary to carry it until it is needed.

Steam line experience has developed a type of freight house which, with but slight modification, seems to meet the requirements of the typical interurban line.

*"This ware house is 36-50 feet in length with numerous doors from 8-10 feet in width on the team side, and doors arranged on the track or car side so that cars may be set with their doors opposite the doors of the ware house. The driveway should be paved so that there will be no stalling of heavy loads." The article from which the preceding is quoted is the authority for the statement that,"Careful consideration of the elevation of a freight house floor above the driveway has resulted in the general adoption of a height of from 3 feet 6 inches to 4 feet. On the track side of the ware house, as many tracks, up to four, paralleling the building should be installed as the volume of the business may require. Rather than increase the number of tracks to relieve congestion in the ware house, it is better to extend the ware house and the tracks to accomodate the increase in business. More than four tracks at the ware house have been

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*Article in E. R. J. "Freight Transportation,"(No author given), Oct.4,1913.

found to increase congestion rather than relieve it." This seems to be a point well worth attention. It will influence the original purchase of land for the terminal and also the future additions to the terminal as the business develops.

In order successfully to handle the perishable freight which will make up a large bulk of the traffic, it will be necessary to have adequate facilities for keeping it in storage until it is delivered to the consignee. If a cold storage room is not available for use, then the next best thing would be to construct an underground room on the order of a cellar. This will provide a place which does not experience extremes in temperature and which doubtless will prove satisfactory for the purpose. Some arrangement should also be made for heating slightly the main storage room. Also scales should be installed wherever necessary.

The way freight stations, located at the small towns, may be combined with the passenger station. A team track should be provided for handling car load business. Opinion differs as to the proper elevation of the floor in the freight room as well as to the elevation of the platform which parallels the track at these way stations. One argument is that less-than-car-load freight may be handled more expeditiously from a platform at the track level than from one elevated to the car floor. But it must be remembered that freight unloaded on a platform at track level will be in the way of passengers

unless the freight is unloaded a considerable distance from the building which will result in an excessive amount of trucking. But if the way station platform and the freight room floor are at the same level, as is the practice in steam roads, freight may be handled with very slight amount of trucking.

The writer agrees with one authority* that side tracks at way stations should be double ended or in the Wye form, so as to make switching unnecessary. Also these tracks should be located so as to make them available as house tracks or as team tracks. The same author says further, "Some traffic managers have decided that the house track is unnecessary at way stations, believing that if the freight in question is sufficient to make a car-load, it can be handled to better advantage directly to the car than through the freight house. This eliminates one handling by the agent, and assists materially in keeping down fixed charges by making small freight rooms possible". Thus it may be seen that this is a question which will bear quite heavily upon the design of the way stations. The best policy would be to determine the most efficient type for the particular road in question and then adopt this general type of way station, but allow it to be modified so as to meet the existing conditions.

It is perhaps, unnecessary to mention here the item of scales. These are, of course, a necessary part of the equip-

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*Article in E. R. J. "Electric Traction", (No author given) Oct. 4,1914.

ment of the freight house. They should be of a standard make, and preferably the automatic recording type.

In the case of rather large freight stations, one point of construction which has been followed by quite a few roads is to build a platform 6-8 feet wide between the ware house and the first track. This enables the trucker to pass out from any one of the doors of the ware house and move along the platform to the door of the car where he is to load. This arrangement decreases the amount of trucking to be done inside of the freight house itself, and consequently eliminates quite a bit of confusion.

IV. Methods of Obtaining and Handling the Business.

Let us assume that we have an electric interurban line which is equipped to handle freight. The question arises as to how to proceed to get this traffic.

First of all, it will be necessary to make a very complete survey of the entire field which the line enters. It might be well to employ for this a large map of the road and the adjoining territory. Each time a probable source of traffic is located, it should be marked down on the map. Card indexes should also be prepared, giving all the available data concerning the various activities along the line. It would be well to index thus each farm along the right-of-way. All available data should be gathered and tabulated on the cards. The manufacturers and merchants of the various towns

should be treated in the same manner. It will be a slow, painstaking job, but when completed will give very reliable data which will show where the opportunities for traffic are the greatest and will probably indicate the means which should be used in soliciting this traffic.

On a line of this kind, a solicitor is an absolute necessity. The people need to be made fully aware of the possibilities that are within their reach. It should also be borne in mind that it is almost essential that separate solicitors shall be employed for the city and country traffic. It needs an entirely different type of man to deal with the rural population than is needed for solicitation in the cities. For the country, a very good plan would be to employ a man as solicitor who is well known to the farmers and a man whom they will trust. Let this man do nothing for quite a while but visit the farmers and acquaint them with the purpose of the interurban and the possibilities afforded by the transportation facilities offered. By constant visits supplemented by the cooperation of the electric road in the way of service, and newspaper advertising, the farmer can be induced to try this method of transportation, and then it is a question of service rendered as to whether or not he will continue to use the line. The chances are all strongly in favor of his continuance, however, if the interurban can render any kind of service worth using. The visits of the solicitor should be supplemented by suitable advertising literature calling at-

tention to the schedule of the cars, rates, general facilities, and advantages of this means of transportation. A good live man, coupled with a live road, should work up a splendid freight business in this fashion.

A city solicitor should be employed whose sole duty is to visit the various manufacturers and lay before them the opportunities offered by this class of transportation. The city freight solicitor should have a thorough knowledge of what he is presenting. Too often it is the case that a solicitor may be a good talker, but may not know or understand just what he is talking about. The city solicitor should have a rather good knowledge of railway matters so that he can present in an intelligible manner the various advantages which will accrue to his prospective patron if he can be prevailed upon to use the interurban line for the transportation of his freight.

The solicitor must know and be able to talk intelligently about freight rates, for it must be remembered he will always be dealing with men who have had much experience with railroad rates, and who are also very much interested in securing a lower cost of transportation.

V. What Some Companies are Doing.

It is a difficult matter to put into a short chapter the many different phases of freight transportation that the electric railroads have encountered and the means used for

carrying on this business, but a few words might be said along this line, just to show what the present condition of traffic is.

*The Detroit United Lines afford a good example of what can be done in building up a profitable freight and express business.

The Detroit United Lines radiate from Detroit, Michigan, touching the most important towns of the surrounding country. The termini of the various lines are; Port Huron, Flint, Pontiac, Farmington, Jackson, Michigan, and Toledo, Ohio. Thus it may easily be seen that this system at once presented a promising field, especially as in some places there was no steam line competition.

In 1900, at about the beginning of the Company's freight and express traffic, this system was not united as it is today. The lines were separately owned, and each had its own terminal in Detroit. Also, each had an agent in charge of the freight and express business. The freight and express business had been rather forced onto these lines, and consisted only of small package shipments, which were handled on the passenger cars.

During 1900, when the Detroit United Railways acquired the various lines, the freight business on the various lines had developed to such an extent that it had become necessary

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*Express and Freight Service on Detroit United Lines, E. R. J. vol. 43, p. 1022.

to put on some special freight cars, and to do away with the practice of carrying on this business in the compartments of the passenger cars.

At first, the freight and express matter was loaded directly from the cars to the consignee's doors, or transfer wagons. But as the business expanded, this drew serious complaint from the property owners, who claimed that streets and sidewalks were being blocked at points where deliveries were made. Also the civic authorities of Detroit took up the matter, and requested that the railway arrange for a suitable place for the receipt and the delivery of goods. The result of this agitation was the purchase of freight house property, this being located just outside the business district of Detroit, and close to the freight terminals of five steam roads. The location was also near the docks of several large steamship companies, so it was easily accessible for transfer shipments.

The construction of this terminal resulted in the concentration of the freight and express business handled over the various lines, consequently the Detroit Electric Depot Company was organized to receive and forward shipments over all lines; also arrangements were made whereby all other freight and express agencies in the city were discontinued, and combined into one. The great advantage of this arrangement is the added economy and facility for prompt handling.

Previous to this time, the rolling stock which had been used for freight service consisted of discarded passenger equipment. This practice was found to be detrimental to the freight service, and consequently new rolling stock was purchased which was designed especially for handling this freight traffic.

The former practice had been to receive and deliver freight directly from the car to the store in small towns, but this seriously interfered with traffic, as it blocked the main line at this point for the time being, and when these freight cars engaged in making deliveries had to clean main line for the passenger trains, it was necessary to make a round trip to some switch before unloading could be completed. As a result, there were numerous errors created through improper checking. To add to the confusion of this method, no receipts were taken for shipments delivered in this manner, and consequently when a claim arose, it was practically impossible to settle it. After this unsatisfactory condition had existed for some time, the company adopted the policy of creating an agency wherever the business warranted, and making this agency responsible for the checking and the delivery of all shipments.

The original freight terminal which was built on the property acquired for the purpose has been outgrown by the business for several years. The terminal itself is peculiar for the reason that it is built on a hillside. The tracks approach the site on two sides over main city thoroughfares,

one along the top of the hill and the other along the bottom. The difference in the grades of the two streets made it necessary to level off the property, provide a retaining wall on the lower side, and operate it as a stub terminal.

The first ware house constructed was 40 feet wide and 200 feet long. This was of ample capacity to handle both the outbound and the inbound business at that time, but the traffic increased so rapidly that it was soon found necessary to build another ware house of the same size. This was used exclusively for the inbound business. Parallel tracks and a covered platform were constructed between the two buildings.

In the organization of the traffic department, the keynote has been simplicity. Those offices making up this department being a general freight and express agent, a travelling freight agent, a chief clerk, and "over, short and damage" clerk, and a claim clerk. At the way stations the regular agents are in charge of the freight and express business, and report on such to the general agent.

The most noteworthy feature of this organization is the lack of solicitors. The Detroit United Company hold the opinion that the only kind of freight to solicit is freight which will bear a high rate and take a low terminal charge. The traffic department has done much to eliminate undesirable shipments by filing exceptions to the Official Classification. The Company also increased rates on some commodities to such an extent that it became profitable to handle them.

The Electric Depot of Detroit ranks high in the quantity of express and freight that is handled daily, more than a million pounds of less-than-car-load shipments being received and delivered each day. The outbound shipments generally exceed the inbound. The freight here is handled in a manner which has been found very efficient. A general foreman is in charge of the ware house force, and under him are the foremen in charge of the outbound and inbound houses, along with the checkers, callers, and truckers.

One interesting fact brought out by this Company is that the best help as truckers and checkers is none too good. The better the help, the less will be the claims for lost and damaged shipments. The result has been that this Company has adopted the policy of paying wages that are a little higher than those paid by the steam roads, so the best men engaged in this kind of work are obtained.

On an average more than 1250 shipments requiring expense bills are forwarded and received each day. The local agent's staff for handling his business includes a chief clerk, chief biller and five bill clerks, an account man, a head collector, an accountant and an assistant, two abstract men, three men on over, short and damage reports and tracing shipments, one messenger, one file clerk, two stenographers, and one switchboard operator.

The telephone service has proved quite an important factor in this business, and as a result four lines run into

the local agent's office, and each can be connected with the various departments.

The milk traffic which this road has developed is one of the largest of its class in the country, amounting to more than 2000 cars daily. A milk-train service is furnished on all divisions and the schedules are arranged to meet the needs of both consignor and consignee. It might be interesting to note that for this service, the Michigan Railway Commission has issued an order for rates as follows: 15 cents per 10 gallon can for a distance of 1 mile to 30 miles for either milk or cream, and 22 cents for distances of 31 to 35 miles, with a graduated scale for greater distances. This Detroit United Railway System is but one of the many examples of what has been done in the way of a road actually building up and making a profit from the freight traffic.

*The history of the freight and express of the Providence and Danielson Railway affords an excellent example of the methods which may be used for the development of traffic in virgin territory. This road has its terminals at Danielson, Connecticut, and Providence, Rhode Island. Danielson is due west of Providence, but the road follows a very tortuous route between these two points. The total length of the line is 35 miles, and some idea of its isolation may be gotten

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*Freight Business on a New England Electric Railway,(No Author given) E. R. J. vol.XL, p.995.

from the fact that it lies midway between two branches of the New York, New Haven, & Hartford which are about 24 miles apart at the widest point. The country is very hilly, and despite its proximity to Providence, the territory is covered with heavy timber. There were also numerous valuable quarries here, but neither the timber nor the quarries had ever been exploited because of the lack of transportation. Farming was also but slightly in evidence. As a result of these conditions, the builders of the roads found themselves in a position where they must create traffic.

A thorough study was made of the natural resources of this territory, and solicitors were sent to interview people who would be the most interested in the establishment of transportation. As a result a traffic was created. Of course, this was small in the beginning, but it has developed at a rather rapid rate. The Company now hauls eight cars of wood per day, each car carrying from 10-14 cords, from a forest which is thirty miles distant from Providence. This traffic is due to the efforts of the freight solicitors. They acquainted the lumbermen with facts concerning where the lumber could be obtained, presented figures to show at just what price it could be cut and sold in Providence. Thus the timber resources along the line were made to yield a substantial traffic. The quarries were made to furnish a traffic in stone by substantially the same methods.

The milk business was also made a source of revenue for

this line. Before the electric line was constructed it was the practice of the rural residents to feed the milk to the pigs or make it into butter, as it was too expensive to transport the milk itself to market. The construction of this line has resulted in the development of a milk traffic so extensive that a special milk car, carrying 800 to 900 cans of milk, leaves for Providence every day.

This milk car is let out to a dairymen's group known as the Providence and Danielson Milk Car Association. The car leaves at 6 a.m., and picks up all the milk cans at cross roads and reaches Providence at 9:40 a.m. This development of the business was made possible by carrying the city milk men to the country and letting them explain just what they would pay for milk. This procedure furthered the growth of the milk business, by inducing the farmers to improve their land and buy more cattle. The Company also shipped to them many car loads of fertilizer.

Another rather interesting feature was the development of the huckleberry business. This field was created by having a contractor look into the field for berry raising and then renting a car from the road at a certain per diem rate. In the season for this fruit, the contractor brings in 175 crates a day.

Parallel to the development of this freight traffic came the rise in the value of the surrounding farm lands. Where there were, before the electric road appeared, many

deserted farms, it is now nearly impossible to purchase a piece of land at a reasonable figure. Under the former conditions, twenty-four to forty-eight hours would elapse before the merchants along the route could get supplies from Providence. They can now telephone their orders in the morning to Providence and have them in the afternoon.

Ice farming was another feature which added to the traffic carried by the road. An ice house of 12,000 tons capacity is now in use at a lake along the line. This lake is fed by springs, and the ice from it is of exceptional quality and is eagerly sought.

A good revenue has also been realized by this line in hauling cotton in compressed bales to local factories,and in carrying coal from tidewater.

The present business amounts to about 100 tons per day, of which 10 to 18 tons are moved in less-than-car-load lots.

The business has been somewhat hampered by the fact that the franchise of the road permits only passenger cars to enter Providence in the daytime. This necessitates that all freight traffic shall be handled at night, and this limits, of course, the volume of business. At the present the freight earnings of this road are 30 per cent of the gross revenue.

Another example that might be cited is that of the Illinois Traction System, which is composed of some twenty subsidiary companies and which was organized in 1901, and which now includes more than 450 miles of interurban main line track. Its longest direct line is from St. Louis, Mis-

souri to Danville, Illinois, a distance of 227 miles. There is also a line connecting Decatur, Illinois with Bloomington, Illinois, a distance of 45 miles, and another extending from Springfield to Mackinaw, Illinois, 57 miles to the north.

In 1903 the Illinois Traction System handled its first freight traffic. The first venture was more in the nature of an experiment to see just what might be expected from this source of revenue. The first freight was handled in a passenger car. Three of the front seats on each side of the car were removed to make room for the freight. The first run was made between Danville and Champaign, Illinois. The first day the car earned seventeen dollars with a labor expense of about five dollars. The car was continued in the service. In a month's time, all the remaining seats in the car had been removed to accomodate the business.

The growth of the freight business of this line has been remarkable, and with this growth has come great possibilities of future traffic through the physical connections which this road has established with the steam lines.

At the present time the Illinois Traction System has physical connections with the Chicago and Eastern Illinois, the Rock Island, and the Wabash. The latter connection gives an additional outlet for grain and permits this traffic to be handled to all points on the Wabash Railway in Central Freight Association territory, including New England and the sea-board points. The Illinois Traction System is the first electric

line to accomplish connections opening so great territorial possibilities.

Interchange relations have also been made with the Iowa Central Railroad, which permits the Traction Company to handle traffic to the Twin Cities in Minnesota, and for points as far west as North Dakota. Interchange relations have been accomplished also with the Missouri, Kansas, & Texas; the Saint Louis, Iron Mountain & Southern; the Missouri Pacific; the Frisco Lines; the Chicago, Burlington & Quincy ; and the Saint Louis and Southwestern.

Thus, because of these interchange relations, the Illinois Traction System is enabled to handle traffic, by way of the Saint Louis gateway, to and from Missouri points, Arkansas, Oklahoma, New Mexico, Texas, Trans-Missouri, and Trans-Continental territory. This business consists of both car-load and less-than-car-load traffic.

A yard has been arranged for at Granite City, Illinois, which will serve the double purpose of a storage yard and as an interchange yard with the Saint Louis Terminal Railroad Association.

The Illinois Traction System serves an exceedingly rich territory, this territory consisting of a great grain producing belt which is interlaid with rich bituminous coal fields. Both the grain and coal traffic is very important.

Located along the right-of-way of the Company are more than twenty grain elevators, which are successfully operated by the farmers themselves. Each elevator is owned and

operated by an Elevator Company which is made up of the farmers who make use of the elevator. The Traction System has no material interest in these at all, being concerned only with keeping the farmers awake to their opportunities. All the benefit derived by the electric road is gotten from the traffic which these provide. The elevators are of a modern type of from 10,000 to 50,000 bushels capacity. They cost from $3,000.00 to $10,000.00. The farmers who own these elevators have also, at the instigation of the electric road, constructed corn cribs along the right-of-way. Here they store their corn until the market is right. Then the corn is taken to the elevator and shelled, and sold. Some idea of the business created by these elevators may be obtained when it is considered that for each elevator there is a resulting grain traffic of 150 cars, each of 80,000 pounds capacity.

These elevator companies, as a side line, deal also in soft coal, sand, and gravel. This procedure results in the creation of an inbound traffic, to the benefit of the interurban.

Due to increased demand for bituminous coal in the territory served by this interurban railway, it has been found advisable to develop this source of traffic. Physical connections have been made with eight coal mines whose total out-put is about 14,000 tons per day, half of which is handled by the electric road. Besides the grain and coal traffic, the road

has traffic due to various industries which are located along its tracks; industries such as building and paving brick manufactures, sewer pipe and drain tile manufactures, three artificial ice plants, all furnish their quota of traffic. The Company has also developed two sand and gravel pits. Material from these is used on the Company's own lines, and is also sold and shipped to the commercial trade.

A dairy traffic department is also maintained, the purpose of which is to promote and increase dairy house products in general, chief of which at the present time is cream and milk shipments into the larger cities. Meetings are held at the various school houses, and scientific talks are given on various subjects directly connected with the dairy business. As a result of the work of this department, approximately 10,000 gallons of milk and cream are handled daily over the interurban lines.

*The equipment necessary to handle this extensive freight traffic consists of 17 electric locomotives, 5 electric pulling cars, 17 express motors, 121 express trailers, 116 box cars, 34 flat cars, 354 flat bottom coal cars, 199 hopper bottom cinder cars, and 4 refrigerator cars.

The growth of the business on the Illinois Traction System has been steady.

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*Freight Arrangements on the Illinois Traction System, Electric Traction, Feb. 1913.

The growth of the less-than-car-load traffic has necessitated an increase in the ware house facilities at the various terminals. Within the last year the capacity of the freight houses at Peoria, Decatur, and Springfield has been doubled.

As to the extent and character of the freight business that is done by the interurban lines of the country, it might be well to give the data which were prepared by the "Committee on Express and Freight Traffic" and read before the American Electric Railway Transportation and Traffic Association, at Atlantic City, New Jersey, in October, 1913. This Committee sent a questionnaire to all electric railroads which resulted in the compilation of the following information about this class of business:

	Local and Interline	Local Freight	Only Express	Do not Handle	Total
Eastern States	24	12	-	3	39
Western States	17	5	1	2	25
Southern States	-	2	-	1	3
Middle States	28	9	1	-	38
Totals	69	28	2	6	105

The same questionnaire also brought in some opinion as to a uniform system of classification and rates, this opinion seeming to favor a uniform class rate on an agreed mileage basis in small zones. The replies also indicated a favorable attitude of the roads toward adopting the "official" railway

classification which was applicable to the territory which the road served; and the adoption of the per diem rules and storage practices which are followed by the steam lines.

The compensation which the lines receive for the freight which they are now handling will approximate closely 3 cents per ton mile hauled. The Committee was unable to get any general figure from the Indiana lines, but a report of the Public Service Commission of Ohio shows a gross earning of 0.5 cent per ton per mile haul for steam line for freight tonnage and revenue. The Committee assert that this is the figure which interurban lines are approaching under the present practice of accepting all classes of freight on the same basis of revenue that is received by the steam roads. It is for this reason that the committee urge a higher rate for the interurban railway, arguing that this figure is too low to allow a reasonable profit, and that the class of service which the interurban renders is entitled to a larger compensation than is received for the inferior service of the steam lines.

To show the growth of the interurban freight traffic, the following two tables are presented. The figures contained in these are given by the Report of the Bureau of Census for the years 1902 and 1907. Later statistics were not available when this paper was prepared.

These tables show that as a general thing the freight traffic is regarded as a profitable source of revenue, and yet capable of much development. These tables also indicate

TABLE

TRAFFIC OF SELECTE

(From Censu

	State	Name of Company	Length of track (miles)	Average speed of cars in miles per hour		Proportion of earnings from freight and express to total railway earnings (Per cent)
				Entire trip	Outside of town limits	
1	New York	Schecectady Railway Co.	36.12	15-16	20	4.5
2	Penna.	Lehigh Traction Co.	20.09	12	-	1
3		Wilkesbarre & Hazelton R. R. Co.	28.00	30	-	-
4	Ohio	Youngstown-Sharon Railway & Light Co.	42.25	16-20	20-25	1
5		Stark Electric R.R.Co.	26.97	23	-	-
6		Western Ohio Ry. Co.	77.97	20	-	-
7		Cincinnati, Dayton & Toledo Traction Co.	78.35	-	-	-
8		Columbus, Buckeye Lake & Newark Traction Co.	43.50	-	-	6
9		Eastern Ohio Traction Co.	90.00	20	-	25
10		Dayton & Xenia Transit Co.	50.12	16	-	-
11	Michigan	Detroit, Ypsilanti, Ann Arbor & Jackson Ry.	91.42	20	-	9
12		Detroit, Monroe & Toledo Ry. Co.	29.92	21	-	8
13	Indiana	Indianapolis, Columbus & Southern R. R. Co.	19.00	18	22	-
14		Richmond Street & Interurban Ry. Co.	30.50	18-24	-	-
15		Indianapolis & Eastern Railway Co.	18.04	20	-	-
16	Illinois	Peoria & Pekin Terminal Ry. Co.	8.68	15	-	-
17		Chicago & Joliet Electric Ry. Co.	62.89	20	-	-
18	Iowa	Waterloo & Cedar Falls Rapid Transit Co.	40.00	12-20	-	25

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NTERURBAN RAILWAYS.

eport of 1902)

Character of freight and express carried	Remarks regarding freight and express
roceries and provisions, small farm products, dry goods.	Will handle greater part of high-class goods ultimately.
ackages.	Mining region
- -	- -
ust beginning.	Is creating much new business; expects much express.
ndeveloped.	- -
ruits, produce, groceries.	98 per cent is between towns.
ostly merchandise in packages.	Express handled by separate company; heavy freight not sought.
xpress.	- -
eneral.	Handles cars from steam roads.
roceries, beer, fruits, merchandise.	- -
arm produce, groceries, dry goods, light merchandise.	- -
- -	- -
lk, beginning only.	- -
- -	- -
- -	- -
- -	Handled by steam locomotives.
roduce, groceries, milk, beer.	- -
eneral; rapidly growing.	Interchange with steam roads, uses steam in part.

TABLE

TRAFFIC OF SELECTED

(From Census

	State	Name of Company	Miles of track operated	Average speed of cars in miles per hour	Proportion of earnings from freight and express to total railway earnings (Per cent)
1	Mass.	Conn. Valley Street Ry.Co.	47.30	10 - 16	2.6
2		Boston & Worcester Street Ry. Co.	79.58	11 - 21	-
3		Fitchburg & Leominster Street Ry. Co.	40.70	8 - 14	-
4	Conn.	New London & East Lyme Street Ry. Co.	11.14	11	4.0
5		Groton & Stonington Street Ry. Co.	20.66	14	0.6
6	New York	Rochester, Syracuse & Eastern R. R. Co.	71.73	23	-
7		Oneonta & Mohawk Valley Ry.	66.33	18 - 19	24.2
8	New Jersey	Camden & Trenton Ry. Co.	44.55	12	-
9	Penna.	Lackawanna & Wyoming Valley R. R. Co.	49.69	25 - 38	9.1
10		Meadville & Cambridge Springs Street Ry. Co.	17.10	16	6.7
11		Conestoga Traction Co.	143.78	15	5.0
12	Ohio	Eastern Ohio Traction Co.	82.78	12 - 19	27.3
13		Cleveland, Painesville & Eastern R. R. Co.	45.09	20	6.3
14		Dayton & Xenia Transit Co.	53.01	14 - 18	7.7
15		Toledo, Port Clinton & Lakeside Ry. Co.	57.03	22	12.9
16		Toledo Urban & Interurban Ry. Co.	58.56	35	10.8
17		Stark Electric R. R. Co.	34.42	20	4.9
18		Steubenville & Wheeling Traction Co.	12.40	12	4.9
19	Indiana	Evansville Suburban & Newburg Ry. Co.	27.80	19 - 22	23.5
20		Louisville & Northern Railway & Lighting Co.	31.39	12 - 21	1.2

). 2.

NTERURBAN RAILWAYS.

eport of 1907)

Character of freight and express carried	Remarks regarding freight and express
ıtional Express Co. business	Think prospects good - propose going in on larger scale.
ınd small parcels.	Believe freight and express service to be a great convenience and to help build up passenger service.
ɔne.	
ɔne.	- - -
reight.	Prospects for future development good.
eat, grain, groceries, green	Less profitable than passenger,
stuff,lumber,furniture,iron.	but are well pleased with growth.
ɔne.	None handled.
lk, farm produce.	Expect stead increase.
ɔne.	No franchise for carrying freight.
neral freight.	Usual interchange arrangements on through billing.
roceries, ice cream, fruit,	Agents at terminals handle freight;
eat, beer 50 per cent.	prospects very good.
lk, farm produce, groceries,	Should show rapid increase.
obacco, etc.	
rchandise, all kinds.	Depends on growth of country.
ndled by Electric Package	- - -
gency.	
rchandise, all kinds.	Records show regular increase.
ushed stone.	Can not say.
rchandise.	Interchange of local business with steam roads would increase traffic 75 per cent.
neral merchandise; package	Could be greatly increased.
reight.	
- -	Freight so light, was discontinued.
rchandise.	Good field for development.
l kinds of freight except	Limited future development.
ive stock.	

TABLE NO. 2

TRAFFIC OF SELECTED

(From Census

	State	Name of Company	Miles of track operated	Average speed of cars in miles per hour	Proportion of earnings from freight and express to total railway earnings (Per cent)
21	Illinois	Chicago, Harvard & Geneva Lake Ry. Co.	11.62	20	52.9
22		Chicago & Milwaukee Electric R. R. Co.	132.86	30 - 35	13.7
23		Chicago & Joliet Electric Ry. Co.	82.95	9 - 20	0.6
24		Illinois Traction System	418.82	25 - 28	12.1
25	Michigan	Grand Rapids, Holland & Chicago Ry.	76.60	20 - 29	20.8
26		Detroit, Flint & Saginaw Ry. Co.	13.75	14	6.2
27		Detroit & Port Huron Shore Line Ry.	127.72	22	13.4
28		Detroit, Jackson & Chicago Railway.	104.86	16 - 22	16.2
29		Detroit, Monroe & Toledo Short Line Ry. Co.	74.46	21	12.5
30	Iowa	Iowa & Illinois Ry. Co.	40.38	28	14.1
31		Interurban Ry. Co.	79.65	23 - 24	25.8
32		Cedar Rapids & Iowa City Ry. & Light Co.	30.50	18	15.1
33	Missouri	Southwest Missouri R.R.Co.	64.57	14 - 18	1.2
34	Kentucky	Louisville & Eastern R.R.	23.82	25 - 34	18.2
35	Colorado	Colorado Springs & Cripple Creek District Ry. Co.	18.42	12 - 14	-
36	Washington	Spokane & Inland Empire R. R. Co.	232.19	33	24.4
37	California	Pacific Electric Ry. Co.	454.26	16 - 30	6.7

Continued)

NTERURBAN RAILWAYS.

eport of 1907)

Character of freight and express carried	Remarks regarding freight and express
eneral freight and express.	Increasing yearly.
tone, coal, gravel, milk, water	- - -
5 per cent freight, limestone; 80 per cent express, meat,beer.	Charter compels carrying of freight; business not profitable.
11 commodities.	Will equal passenger receipts if developed; district soliciting agents.
eneral merchandise, 80 per cent; grain,fruit,other farm produce.	Would increase greatly with through railroad connections.
heese, groceries, fresh meat, milk, etc.	Carried in baggage apartments. Can be largely increased.
roceries, provisions, dry goods, hardware,milk,butter,eggs, etc.	Still in its infancy.
roceries, provisions, dry goods, hardware,milk,butter,eggs, etc.	Still in its infancy.
roceries, provisions, dry goods, hardware,milk,butter,eggs. etc.	Still in its infancy.
11 kinds.	Can be greatly increased.
oal and brick.	More profitable than passenger.
erchandise, 40 per cent; stock, 35 per cent.	Less profitable than passenger.
ruits and vegetables.	- - -
eneral merchandise.	Should be large and very profitable.
team trains handle.	Steam trains will always handle.
gricultural products,20 per cent; mining products,3 per cent; lumber,54 per cent; manufactured articles, 14 per cent.	Great possibilities for future development.
rushed stone, leading commodities, fruits, vegetables.	Increasing steadily.

the diversity of the traffic, and its comparison in revenue with the passenger traffic.

VI. Summary and Conclusions.

The fact remains indisputable that the electric railways are irrevocably placed where they must in the future, if not at present, handle some sort of freight or package express business. If they must handle this business then it should be made a source of profitable revenue instead of being regarded as a necessary evil which must be endured.

The average interurban line can render a class of service with which the steam line cannot compete. The interurban is fast and certain, and better suited to meet the varying conditions of traffic which will be encountered. For this better class service, the electric road has the right to expect and to receive a higher compensation than is given to the steam line. The nature of the traffic is such that a higher charge will be paid gladly by the shipper, as he will be more than willing to pay the excess above steam road rate in order to get the better service.

But in order to get and maintain this traffic, a freight traffic department must be organized. This is necessary even though the business is small, as it is too much to expect that this class of traffic can be carried on without some special arrangements being made, and some definite system established.

Even though the freight department is small, it is nevertheless a necessary part of any plan which is undertaken to build up a freight business.

A thorough study of the field is necessary, and definite plans must be laid as to just what sources of traffic exist and the best methods of obtaining this traffic.

Also it must be admitted that the ecomonic effects will be very beneficial. *The Municipal Market's Commission of Chicago reported that it is advisable for the interurbans reaching Chicago to act as the carriers of produce, and thereby bring the markets and farmers into more intimate touch. The Commission further states that such a procedure would save the people $51,000,000.00 a year in "middle men's" profits.

That the majority of interurban lines can, by various methods, increase their revenues by handling this freight traffic is a reasonable assumption. It has been done in the past, and the more optimistic companies assert that the business is just being touched at present.

Of course, it will be necessary for the electric road to make proper terminal arrangements and facilities, and to purchase much new equipment, but even so, the business obtained thereby will be permanent, and will, by careful management, come to be a welcome source of income.

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*Chicago Market's Commission Recommends Use of Interurban Freight Service. E. R. J. vol. 43, p. 1101.

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